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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,063

02/13/2004

Youji Notoya

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07/30/2008

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EXAMINER

ANYIKIRE, CHIKAODILI E

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/777,063	<b>Applicant(s)</b> NOTOYA ET AL.	
	<b>Examiner</b> CHIKAODILI E. ANYIKIRE	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2, 3 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 6-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This application is responsive to application number (10777063) filed on February 13, 2004. Claims 1-15 are pending and have been examined.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 21, 2008 has been entered.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8 and 9 rejected under 35 U.S.C. 102(b) as being anticipated by Boon et al (EP 0 971 543 A1).

As per **claim 8**, Boon et al disclose a moving picture decoding method for decoding, on a picture-by-picture basis, a coded stream comprising:

coded picture data for each picture included in the coded stream; display order information for each picture included in the coded stream; and a flag inserted into the coded stream so as to indicate a position among the coded picture data where the display order of the pictures is non-sequential (Fig 5a, Had, alignment data, Figs 5 and 6; [0141], [0150] and [0190]; the flag is also able to provide a position of the current picture since it is inserted between two pictures), the method comprising, the method comprising:

an information extraction step (Fig 8, 502) of extracting the flag indicating a position among the coded picture data where values of the display order information of the pictures is non-sequential (paragraph [0216] and [0217]); and

a management step (Fig 8, element 521) of managing a storage memory area for storing a decoded picture based on the flag (paragraph [0220] – [0222]; Boon discloses a controller, which includes control signals to the prediction data generators that has a frame memory that stores reference image).

Regarding **claim 13**, arguments analogous to those presented for claim 8 are applicable to claim 13.

Regarding **claim 15**, arguments analogous to those presented for claim 8 are applicable to claim 15.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 4, 6-7, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boon et al (EP 0 971 543 A1) in view of Mitsuhashi (US 2002/0113898).

As per **claim 1**, Boon et al disclose a moving picture coding method for coding a moving picture signal on a picture-by-picture basis and generating a coded stream, the method comprising (Fig 3):

a flag information generation step (Fig 3, 433) of generating flag information indicating that display order information or coding order information of the picture is non-sequential (paragraph [0105] and [0141]); and

a coded stream generating step of generating a coded stream comprising: the coded picture data for each picture to be included in the generated coded stream; and inserted into the coded stream so as to indicate a position among the coded picture data where the display order of the pictures is non-sequential (Fig 5a, Had, alignment data, Figs 5 and 6; [0141], [0150] and [0190]; the flag is also able to provide a position of the current picture since it is inserted between two pictures).

However, Boon does not explicitly teach a detecting step of detecting whether the values of the display order information for the pictures to be included in the generated coded stream are sequential or non-sequential; and

when said detecting step detects that the values of the display order information for the pictures to be coded included in the generated coded stream are non-sequential.

In the same field of endeavor, Mitsuhashi teaches a detecting step of detecting whether the values of the display order information for the pictures to be included in the generated coded stream are sequential or non-sequential; and

when said detecting step detects that the values of the display order information for the pictures to be coded included in the generated coded stream are non-sequential (paragraph [0038]; Mitsuhashi discloses re-ordering the frames to be in a sequential fashion which suggests that the frame memory (Fig 2, 21) has the ability to detect a non-sequential pictures).

Therefore, it would have been obvious for one having skill in the art at the time of the invention to modify the invention of Boon with the frame memory of Mitsuhashi. The advantage is that the frames are ordered in the proper order so that it may be displayed.

As per **claim 4**, Boon et al disclose the moving picture coding method according to claim 1, wherein in coded stream generating step, the flag (Fig 5a, Hfd) is inserted between two pictures in the generated coded stream (Fig 5a shows that the flag is inserted in between the end of the previous "I" picture and current "I" picture), said two pictures being non-sequential in display order (Fig 5a, paragraph [0167]).

As per **claim 6**, arguments analogous to those presented for claim 4 are applicable to claim 6.

As per **claim 7**, Boon et al disclose the moving picture coding method according to claim 6,

wherein in the coded stream generating step (Fig 3, 414; paragraph [0142]), the moving picture is coded such that a display order of pictures in the predetermined coding unit is sequential (Fig 5a; the predetermined coding unit consist of a plurality of I-frames, which would be a sequential display order), and such that the display order of pictures in a predetermined coding unit is located earlier than a display order of pictures in a predetermined coding unit immediately following said predetermined coding unit in coding order (Fig 5a, the prior art shows the coding unit being displayed earlier than a predetermined coding unit).

Regarding **claim 12**, arguments analogous to those presented for claim 1 are applicable to claim 12.

Regarding **claim 14**, arguments analogous to those presented for claim 1 are applicable to claim 14.

8. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boon et al (EP 0 971 543 A1) in view of in view of Mitsuhashi (US 2002/0113898) in further view of Teo et al (US 5,621,464).

As per **claim 9**, Boon et al disclose the picture decoding method according to claim 8.

However, Boon et al does not explicitly teach wherein the flag information indicates that values indicated by display order information of the pictures are in non-sequential order, and

in the management step, a picture having a value of display order information that indicates that the picture is the earliest in display order among decoded pictures stored in the storage memory area is determined based on the display order information and the flag information, and the determined picture is determined as a picture to be removed.

In the same field of endeavor, Teo et al disclose wherein the flag information indicates that values indicated by the display order information of the pictures are in non-sequential order (Col 1 Ln 29-40; Col 3 Ln 55-63), and



in the management step, a picture whose position is the earliest in display order among decoded pictures stored in the area is determined based on the display order information and the flag information, and the determined picture is determined as a picture to be removed (Col 5 Ln 5- Col 6 Ln 5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the method of Teo et al. It is well known knowledge that with motion prediction specifically B-pictures that the picture order becomes non-sequential. The advantage would be that it notifies the image coding system to correct the picture order sequence, which results in reduction in memory buffer, power consumption and cost (Teo et al; Col 6 Ln 7-11).

As per **claim 11**, Boon et al disclose the moving picture decoding method according to claim 8, further comprising an invalid picture storage step of storing an invalid picture in the area when values indicated by display order information of the pictures are in non-sequential order (paragraph [0220]-[0222] and [0232]-[0240]),

in the management step, whether or not to store an invalid picture in the area is determined based on the flag information and the coding order information (paragraph [0232]-[0240]), and

in the invalid picture storage step, an invalid picture is stored in the area based on a result of the determination made in the management step (paragraph [0220]-[0222]).

However, does not explicitly teach wherein the flag indicates that the values indicated by the coding order information are in non-sequential order.

In the same field of endeavor, Teo et al discloses wherein the flag information indicates that the values indicated by the coding order information are in non-sequential order (Col 1 Ln 29-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the method of Teo et al. It is well known knowledge that with motion prediction specifically B-pictures that the picture order becomes non-sequential. The advantage would be that it notifies the image coding system to correct the picture order sequence.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boon et al (EP 0 971 543 A1) in view of in view of Mitsuhashi (US 2002/0113898) in further view of Teo et al (US 5,621,464), as applied to claim 9 above, and further in view of Asai et al (US 6,710,785).

As per **claim 10**, Boon et al disclose the moving picture decoding method according to claim 9.

However, Boon et al does not explicitly teach clip information is given to the decoded picture stored in the area, said clip information being updated; and

a picture whose position is the earliest in display order among the decoded pictures stored in the area is determined based on the clip information, and the determined picture is determined as a picture to be removed.

In the same field of endeavor, Asai et al does teach clip information is given to the decoded picture stored in the area, said clip information being updated; and

a picture whose position is the earliest in display order among the decoded pictures stored in the area is determined based on the clip information, and the determined picture is determined as a picture to be removed (Col 12 Ln 32 – Col 13 Ln 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the use of clip information of Asai et al. The advantage of modifying the image coder of Boon et al is that it aids in correctly sorting the clip information and display order of the video stream.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is (571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272 - 7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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